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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,469	11/26/2003	John P. Karidis	ARC920030084US1	7647

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EXAMINER	
GEBRESILASSIE, KIBROM K	

ART UNIT	PAPER NUMBER
2128	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/723,469	KARIDIS ET AL.	
	Examiner	Art Unit	
	Kibrom K. Gebresilassie	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This communication is responsive to RCE (Request for Continued Examination) filed on 08/29/2007.

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/29/2007 has been entered.

3. Claims 1-22 are pending.

Response to Arguments

Response to 102(e) rejection: Applicant's arguments filed 08/29/2007 have been fully considered but they are not persuasive.

a. Applicants argued that the Kushler et al. does not disclose the limitation of "*inputting text by tapping individual keys on a keyboard*".

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *inputting text by tapping **individual** keys on a keyboard*) are not recited in the rejected claim(s). Although

the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For sake of argument, Kushler et al. discloses:

> [0006] Analogous to one-finger typing, the current state-of-the art for inputting using a virtual keyboard is called "point and tap". A stylus is moved from letter to letter and pressed down on the desired key to select it. This results in the need to always lift and set down the stylus, slowing input. Cursive handwriting was invented to allow a better (and faster) flow from letter to letter and reduce the number of pen (or quill) lifts. In a similar way, the current invention reduces the number of taps required when inputting using an on-screen keyboard, thus speeding text entry.

b. Applicants argued that the Kushler et al. does not disclose the limitation of "*counting the number of keystroke landing points*".

In response, Kushler et al. teaches:

> [0029] The path traced out on the touch-screen by the user and recorded by the system for analysis is referred to as the input pattern. As the user traces out an input pattern on the touch-screen, the system records the sequence of points of contact detected by the touch-screen controller hardware. As the input pattern is recorded, it is processed by an input pattern analysis component. The input pattern analysis com-

"Counting the number of keystroke landing points" of the claimed invention is inherent to "...system records the sequence of points of contact detected..." of the reference.

c. Applicants argued that the Kushler et al. does not disclose the limitation of "*determining the word based on the number of keystroke landing points*".

In response, Kushler et al. discloses:

> **[0040]** After the input pattern analysis component identifies the inflection points associated with an input pattern, the pattern matching component examines the words stored in the system database to determine which words are the most likely matching candidates. While the aspect described herein is a simple and computationally efficient method to identify which words of a database best match an input pattern, it is to be understood that other alternative approaches could achieve this goal, and should not be considered to be outside the scope of the present invention.

d. Applicants argued that Kushler et al. does not teach the limitation of "*recording a coordinate of a keystroke landing point corresponding to a sequence of tapped keys on said computer keyboard...*"

In response, Kushler et al teaches:

> **[0029]** The path traced out on the touch-screen by the user and recorded by the system for analysis is referred to as the input pattern. As the user traces out an input pattern on the touch-screen, the system records the sequence of points of contact detected by the touch-screen controller hardware. As the input pattern is recorded, it is processed by an input pattern analysis component. The input pattern analysis com-
>
> **[0030]**
>
> pattern; a record of the input pattern consisting of the coordinate locations of the sequence of points of contact detected from the first location of contact through the location at which the stylus was lifted from the screen; a routine to analyze the input pattern to determine the locations associated with one or more inflection points of one or more types, and to calculate the distance between each determined location and the locations associated with text

[0032] In another aspect, the input pattern analysis component first applies a smoothing process to the recorded sequence of contact points to reduce the amount of "jitter" that may be introduced by any inconsistency in the touch-screen digitizer that reports the coordinate location of each recorded point of contact. Algorithms for smoothing a

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Publication No. 2004/0140956 A1 issued to Kushler et al.

As per Claim 1:

Kushler discloses a method of relaxing typing accuracy on a computer keyboard comprising alphanumeric keys and a spacebar key, said method comprising:

recording a coordinate of a landing point corresponding to a sequence of tapped keys on said computer keyboard (**See: [0029] lines 1-7, [0030] lines 7-16. and [0032] lines 1-6**);

counting a total number of landing points tapped only after verification that said spacebar key has been tapped during said sequence (**See: [0029]**);

comparing a geometric pattern formed by an inputted sequence of said landing points to a pattern formed by lexical entry of sequences, wherein said lexical entry of sequences comprises a subset of sequences comprising sequences having an amount of letters equaling said total number (such as ***pattern matching...***; **See: [0029], [0044]**);

calculating a distance between said geometric pattern and the pattern formed by letters corresponding to said lexical entry of sequences (**See: [0042],[0057]**); and

determining a word by selecting a shortest distance between said inputted sequence of said landing points and letters corresponding to said lexical entry of sequences (**See: [0048]**); and

using the determined word to check a correct spelling of a tapped word entry corresponding to said inputted sequence of said landing points (**See: [0049]**).

As per Claim 2:

Kushler discloses the method of claim 1, wherein said distance is a mean distance of all inputted sequence of points (**See: [0042] lines 1-10**).

As per Claim 3:

Kushler discloses the method of claim 1, wherein said distance is an elastic matching distance between said inputted sequence of points and said lexical entry of sequences (such as ...***dynamic programming...***; **See: [0048]**).

As per Claim 4:

Kushler discloses the method of claim 3, further comprising normalizing said elastic matching distance by an amount of letters in said word (**See: [0046]**).

As per Claim 5:

Kushler discloses the method of claim 1, further comprising comparing said shortest total distance to a predetermined threshold distance (**See: [0064]**).

As per Claim 6:

Kushler discloses the method of claim 5, further comprising outputting said word if said shortest total distance is smaller than said predetermined threshold distance (**See: [0035]**).

As per Claim 7:

Kushler discloses the method of claim 5, further comprising outputting letters tapped if said shortest total distance is greater than said predetermined threshold distance (**See: [0035]**).

As per claim 8:

Kushler discloses a method of relaxing typing accuracy on a computer keyboard comprising alphanumeric keys and a spacebar key, said method comprising:

recording a coordinate of at least one keystroke landing point, wherein said keystroke emanates from tapping a key on a keyboard (**See: [0029] lines 1-7, [0030] lines 7-16. and [0032] lines 1-6**);

counting a total amount of tapped landing points only after verification that said spacebar key has been tapped during an inputted sequence of tapped landing points (**See: [0029]**);

creating a set of words from a lexicon having a same number of said tapped landing points (**See: [0040], [0041]**);

for each letter in each word in said set, computing a distance from said coordinate to a central position of said key corresponding to said letter (**See: [0063]**);

summing a total distance for each word (**See: [0042]**); and

selecting a word from said set having a shortest total distance to said coordinate (**See: [0048]**); and

using the selected word to check a correct spelling of a tapped word entry corresponding to said inputted sequence of tapped landing points (**See: [0049]**).

As per Claim 9:

Kushler discloses the method of claim 8, wherein said distance is a mean distance of all said tapped landing points for each word (**See: [0042]**).

As per Claim 10:

Kushler discloses the method of claim 8, wherein said distance is an elastic matching distance between said tapped landing points and said coordinate (such as ***...dynamic programming...***; **See: [0048]**).

As per claims 11-22:

The limitations of claims 11-22 have already been discussed in the rejection of claims 1-7. The instant claims is/are functionally equivalent to the above rejected claims and is/are therefore rejected under the same rationale.

Conclusion

5. All the claims are rejected.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 6,677,932 issued to Westerman et al teaches:

(57) **ABSTRACT**

A system is disclosed for recognizing typing from typing transducers that provide the typist with only limited tactile feedback of key position. The system includes a typing decoder sensitive to the geometric pattern of a keystroke sequence as well as the distance between individual finger touches and nearby keys. The typing decoder hypothesizes plausible key sequences and compares their geometric pattern to the geometric pattern of corresponding finger touches. It may also hypothesize home row key locations for touches caused by hands resting on or near home row. The resulting pattern match metrics may be combined with character sequence transition probabilities from a spelling model. The typing decoder then chooses the hypothesis sequence with the best cumulative match metric and sends it as key codes or commands to a host computing device.

7. Examiner's Note: **Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.** Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. **It is respectfully requested from the applicant in preparing responses, to fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.**

8. **In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on** for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Communications

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is 571-272-8571. The examiner can normally be reached on 8:00 am - 4:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini S. Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KG

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